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Résultats d'une recherche portant sur l'utilité et les avantages pour les étudiants d'une grille de critères d'évaluation des travaux pratiques dans les cours d'enseignement professionnel du niveau secondaire. Une première expérience portant sur l'utilisation d'un modèle général de grille a été tentée au cours de l'année scolaire 1979-1980; il s'est révélé que le champ couvert était trop vaste et les cours trop variés pour pouvoir être évalués par un seul modèle. L'expérience décrite, menée en 1980-1981, porte sur la création et l'application de grilles individualisées pour chaque spécialisation.

Un questionnaire portant sur l'expérience a été rempli par 109 étudiants des quatre dernières années du secondaire inscrits dans cinq écoles anglophones de la région de Montréal; 67% d'entre eux avaient déjà suivi des cours d'enseignement professionnel; 71% n'avaient encore jamais expérimenté de techniques d'évaluation détaillée portant sur le processus de travail et le produit réalisé.

D'une façon générale, la réaction des étudiants et leur acceptation de l'usage d'une grille d'évaluation détaillée est très positive. Ils ont préféré cette approche et apprécié la façon dont leurs professeurs s'en sont servi; ils ont trouvé son usage bénéfique et ne se sont pas sentis angoissés par une telle approche. La réaction des professeurs est également positive et leurs opinions sont semblables à celles de leurs étudiants.

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Benefits of Practical Work Evaluation Schemes to Secondary Students

D. D. McWethy

McGill University
1981

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Merit and Benefit of Practical Work Evaluation Schemes to Students in Selected Secondary Level Vocational Subjects

PPMEP Projects 1979-80 and 1980-81

A Research Study Conducted by

David D. McWethy, Ph.D.
Associate Professor
Division of Vocational Teacher Education
Faculty of Education
McGill University

and Authorized by

Service Général de la Formation du Personnel de l'Enseignement
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The Study was realized with the assistance, cooperation, and participation of the following secondary level vocational teachers:

Mr. William Campbell, Outremount High School, Outremount, Quebec

Miss Carmela DePinto, Vaudreuil Catholic High School, Vaudreuil, Quebec

Mr. Daniel Elizov, LaSalle Catholic Comprehensive High School, LaSalle, Quebec

Mr. Charles Jones, Centennial Regional High School, Greenfield Park, Quebec

Mr. Joseph Lukca, Marymount Comprehensive High School, Montreal, Quebec

Mr. Robert Tertoole, William Hingston Comprehensive High School, Montreal, Quebec

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Introduction

Vocational education is characterized by having a viable practical component as part of its curricular content. This component complements the theory portion found in vocational courses and students are provided the opportunity to apply and practice the knowledge learned in related theory lessons.

The practical component in vocational subjects is essentially skill oriented and a sizeable portion of class time is devoted to the undertaking of these activities. Students perform designated operations and apply specific techniques to gain experience and to develop personal psychomotor and affective skills. An outcome of applying skills and knowledges is usually a tangible product or "project". For example, a student in machine shop learns how to set up and operate a lathe and produces a punch; a secretarial student in a typing course learns typing procedures and prepares a letter based on a certain style.

During the undertaking of practical activities in vocational, industrial arts, or fine art courses, two types of student performances are occurring: (1) the procedure or technique, and (2) the end product or result. These performances, called process and product, consist of specific items which can be and should be measured and evaluated as part of a student's total assessment in any of the courses mentioned.

In many cases, a teacher's assessment of practical work and performance activities of their students is limited to oral comments as to how well process is being done and to a single mark or percent representing

the quality of a product. With this limitation in mind, the need for a more formalized, detailed evaluation was apparent in order to adequately acknowledge this aspect of student performance.

One approach to providing systematic process and product assessment is the utilization of rating scales and check lists consisting of specific qualitative and quantitative criteria. The criteria are directly related to tasks, skills, operations, and inspections inherent to and associated with assignments and activities typically incorporated into selected subject areas.

As a starting point, it is incumbent for any teacher who wishes to formally evaluate practical work activities to develop the means to do it. This requires the identification of criteria or standards upon which the students' performance will be judged. Further, the criteria need to be weighted or assigned values to represent the importance given to each. Next, this information is organized in a structured pattern, usually taking the form of a rating scale or check list.

Recognizing that teachers often do not have the time or perhaps the expertise to plan and develop their own schemes, a model form was prepared by this researcher for their use. It was intended to be used by vocational teachers of machine shop and hydrothermics subjects and five teachers were selected to critique it. Collectively, the five teachers chosen taught courses covering most of the secondary levels (II to V) and vocational programs (exploratory, industrial arts, short-vocational, and long-vocational).

The conclusion from the teachers' extensive review of the model form was simply that their vocational field was too broad and the courses and levels too diverse for any one practical work evaluation form to be appropriate. Attempts to broaden its application only tended to make it more general and less desirable; attempts to make it more specific made it inappropriate for certain subjects, thus less applicable. As a result, it was concluded that the creation of a ideal universal form to fit all practical work situations in the field of metalworking was not feasible. This realization completed the research for the 1979-80 period.

Due to the infeasibility of developing a universal form, it was decided in 1980-81 to work with the participating vocational teachers (four continuing and one new person) to create "individualized" forms — forms which related more directly to the teaching specialities and the secondary levels taught. Personal consultative sessions were set up with the teacher and after a series of meetings spent working on draft forms, a final version for each teacher was agreed upon (see Appendix A). The five vocational teachers agreed to use the forms during the 1980-81 school year in their respective classes.

The Teachers

As mentioned, four of the five teachers involved in the 1979-80 study agreed to continue; a business education teacher was added to the study so that another subject area might be represented. Therefore, the five teachers involved taught the following subjects at these secondary levels:

Subject	Level
Industrial Arts Metalwork	Secondary II, III
Machine Shop-Exploratory	Secondary III
Typing III - IV	Secondary IV
Maintenance Mechanic - Short Vocational	Secondary III, IV
Machine Shop - Long Vocational	Secondary IV, V

The teachers had taught their respective courses 3 to 14 times before, with six times being the average. Each had been teaching at least five years and all, with the exception of the maintenance mechanic teacher, considered their students to be of average ability.

Due in part to their participating in 1979-80, four of the five teachers had used detailed evaluation forms to some degree and were thus familiar with this approach of assessing a student's practical work.

The Students

At the five schools involved in this study, the students were in secondary levels II through V and were enrolled in one of the courses taught by the participating teachers. Mixed classes of boys and girls were evident at two schools in the subjects of exploratory metals and industrial arts metalworking, girls only were in the typing class and only boys were in the maintenance mechanic and machine shop courses. At the end of the school year, the number of students who completed the study's questionnaire totalled 109.

Of the total group of students, 33% had not taken a business or technical course previously; 26% had taken one; and the remaining 41% had taken two or more. And, of the 67% who had previously taken one or more vocational courses, 71% had not experienced detailed process and product evaluation techniques, while only 7% indicated they had been exposed on a regular basis. Consequently, this approach to practical work evaluation was being performed to this group of students essentially for the first time.

Limitations

This investigation was not designed as an experimental study. Therefore, the reader will not encounter an analysis of the data by hypothesis testing, that is, comparing schools, classes, or the evaluation forms.

Since the study, (1) utilized specific and distinct evaluation forms for each teacher, (2) represented students from various secondary levels, and (3) involved different courses and subjects, statistical analysis would be invalid.

For hypothesis testing, all variables, except the treatment, must be constant, controlled, or randomized. By intent and due to practicality, the variables of form, classes, student, level, and teacher become "treatments" and all vary simultaneously, making generalized statistical approaches inappropriate.

The data is presented in percentage form to provide the reader with information as to how students viewed and felt about the nature and concept of formalized and detailed practical work evaluation. Information from the teachers is presented in descriptive form.

The Findings

At the close of the school year, each teacher and the students whose work was evaluated on the forms were surveyed to ascertain their opinions and reactions to the process of having formalized evaluation of their performance and to the nature of the form itself.

The researcher developed a student questionnaire and the participating teachers were invited to supply questions and to critique the outcome. After minor modifications, the questionnaire was prepared in its final form (see Appendix B), was printed, and distributed to the teachers for administration to their students.

Upon completion, the questionnaires were collected and the information coded for computer data processing. A SPSS program was written to calculate the data in cross-tabulation form.

At the outset the teachers were directed to inform their students about the forms and their purpose. In four out of the five schools involved, the students indicated that, yes, this was done (93%). Reported collectively, that is for all schools, as presented in Table 1, the percent drops to 82.4.

Table 1 Response Percent to Questions Dealing with Form Introduction, Completion, and Return

Survey Question	% Yes	% No
Q. Was the form discussed or explained by your teacher before it was used?	82.4	17.6
Q. Were you involved in the filling out of the form in some way?	48.1	51.9
Q. When the form was returned was it explained or discussed?	60.4	39.6
Q. Were you allowed to keep the form when it was returned?	75.5	24.5
Q. When the form was returned did you share the results with your parents?	10.5	89.5

A number of other questions in Table 1 warrant further explanation. With respect to the question dealing with student participation in completing the evaluation form, the manner in which the 48% were involved revealed these ways:

a. Doing a self-evaluation: 11%

b. Evaluating a classmate's work: 6%

c. Being present when the teacher completed the forms: 31%

That students be involved in filling out the form was not suggested, encouraged, or discouraged by the researcher. Individual teacher approaches prevailed and the methods were valid alternatives.

When asked if they were allowed to keep the form once it had been returned to them, 75% of the students indicated "yes". This percentage might have been much higher (92) had the researcher not requested that one of the teachers collect his students' forms for further study. It was the intent that all completed forms be returned to the students for them to retain.

The results from the other questions presented in Table 1 were uniform among the schools. It was hoped that more explanation would have taken place when the forms were returned (40 percent indicated that none was given) and that more students had shared the results with their parents (only one out of ten did).

Generally speaking, the students surveyed had not encountered this approach to assessing their work and performance. Consequently, it was anticipated that some students may have experienced anxiety about the use

of the evaluation form and its detailed criteria. As the data in Table 2 shows, overall, the students did not feel uncomfortable with the form. An average of less than one in ten expressed any type of anxiety.

Table 2 Response Percent to Questions Dealing with Form Anxiety

Survey Question	% Yes	% No
Q. Did you feel the form was threatening in any way?	11.3	88.7
Q. Did you feel the form was intimidating in any way?	12.2	87.8
Q. Did you feel the form was frightening in any way?	7.3	92.7
Q. Did you feel the form was too personal in any way?	6.0	94.0

The information in Table 3 reports on how the students felt the marks they earned on assignments and work performance were realistic. Seven out of 10 believed their marks were representative and valid. For the 32% who thought their marks were not as expected (Question 3), 15.7% noted their marks were less than expected but 16.7% regarded their marks as being higher, making essentially an even split of those who felt they earned too much or too little. This fairly even division was evident at all five schools.

Table 3 Response Percent to Questions Dealing with Marks Earned

Survey Question	% Yes	% No
Q. Were the marks you earned a good reflection of your ability?	71.3	28.7
Q. Were the marks you earned valid and fair?	74.2	25.8
Q. Were the marks you earned about what you expected them to be?	67.6	32.4
Q. Did the teacher add written comments beside your earned marks?	43.8	56.2

Valid teacher marking is particularly dependent upon sufficient and continuous observation of student performance. When asked if they felt they were adequately observed, 78% indicated that such was the case. Only 2% were of the opinion that they were not seen enough; the remaining 20% considered their observation to be questionable.

On four of the five evaluation forms the students' earned marks were recorded on a rating scale, typically ranging from one to four and having headings of "poor" to "well done".

The student reactions to the rating scale used on their teacher's detailed evaluation form is presented in Table 4. An average percent of 85 indicated the rating scales to be valid and justified.

Table 4 Response Percent to Questions Dealing with Rating Scales

Survey Question	% Yes	% No
Q. Was the "well done" to "poor" scale adequate?	84.6	15.4
Q. Was the scale easy to understand?	88.5	11.5
Q. Were the numbered values appropriate?	82.9	17.1

By design and intent, detailed evaluation forms contain a multitude of specific criterion-referenced items to which student outcomes and performances are judged. As a review of the evaluation forms in Appendix A will show, some criteria are often common from form to form, but each also contains criteria unique to it, that is, criteria representative of the particular subject being taught or assignment being given.

Since student performance is judged and rated according to the identified criteria, students were asked to judge the validity of the criteria. The results, as reported in Table 5, show that the responses were fairly consistent regarding this aspect of the evaluation form. An average of 60% considered the criteria to be usually valid, with only 7% feeling they were rarely valid.

Table 5 Response Percent to Questions Dealing with the Validity of the Form's Criteria

Survey Question	Usually	Sometimes	Rarely
Q. Were the criteria appropriate?	61.9	32.0	6.2
Q. Were the criteria understandable?	61.6	31.3	7.1
Q. Were the criteria relevant?	56.7	33.0	10.3
Q. Were the criteria comprehensive?	59.1	34.4	6.5
Q. Were the criteria detailed enough?	65.3	28.6	6.1

In addition to judging criterion validity, the students were given the opportunity to suggest changes or deletions to specific items on the form used by their teacher. Seven percent of the students wrote in recommended changes and 14% suggested deletions, mainly relating to punctuality (reporting to class on time), to skill (accuracy, tool selection), and to planning (consulting different sources).

Interestingly, the students who represented the school which ranked lowest on criterion validity suggested no changes or deletions to their teacher's evaluation form.

The questions reported in Table 6 are general reactions to the forms and the process of having work evaluated in detail.

Overall, 85% of the students said they liked the form used by their teachers. This percent represents students from two schools who recorded 100%; the lowest percent evident was 70.

Table 6 Response Percent to Questions Dealing with the Use of Forms in General

Survey Question	% Yes	% No
Q. Did you like the evaluation form?	85.0	15.0
Q. Should more teachers use evaluation forms?	64.2	35.8
Q. Would you be disappointed if a teacher discontinued using a form once started?	50.9	49.1
Q. Should schools recommend that most teachers use evaluation forms?	62.0	38.0
Q. Was the evaluation form beneficial to you?	78.9	21.1

The next three questions also exhibited wide ranges of percentages among the schools. For example, "Should more teachers use evaluation forms?", the "yes" percent ranged from 36.7 to 100, with an average of 64.2% as shown. When asked if they would be disappointed if a teacher who started using detailed forms was to stop and revert back to only awarding final marks, the student reaction was essentially evenly split. However, a "yes" range between schools of 23.5% to 78.6% was observed. Similarly, the next question also resulted in a broad percent range, namely from 40.0% to 100% with a five school average of 62.0% of the students who preferred their school recommend that most teachers use some type of detailed evaluation.

Nearly eight out of ten students surveyed thought that the results of a detailed evaluation were beneficial to them. The manner in which it might have been helpful is reported in the next table.

The questionnaire identified eight possible items which may have proven to be beneficial to individual students and the students were directed to check as many factors as they wished. The results are presented in Table 7.

Table 7 Response Percent to Questions Dealing with Specific Benefits Associated with the Form

Survey Question	% Yes	% No
Q. Made me aware of weaknesses and strengths.	84.9	15.1
Q. Helped me plan my work better.	74.4	25.6
Q. Made me more safety conscious.	53.5	46.5
Q. Permitted me to make better use of my time.	50.0	50.0
Q. Allowed me to concentrate on my weaknesses.	80.2	19.8
Q. Helped me to know exactly how my work was going to be graded.	67.4	32.6
Q. Made my attitude and performance better.	61.6	38.4
Q. Allowed me to give attention to items being stressed on any particular assignment.	67.4	32.6

The "No" column represents those who did not check the item as being particularly helpful; furthermore, it does not include the 21% of the students who expressed earlier, that overall, the detailed evaluation was not beneficial to them.

The strongest benefits dealt with awareness of strengths and weaknesses and being able to concentrate on the latter. Being in a position to plan better also was shown to be an advantage as was knowing what to look for in particular assignments. Scoring least were items relating to the use of time and to becoming more safety conscious.

The students were also given the opportunity to add ways in which the form may have benefitted them. Three students did comment, expressing that it helped them by being aware of the time needed to complete an assignment, knowing how much more was necessary to be an excellent student, and developing better study habits and homework results.

Recognizing that preparing and utilizing detailed evaluation forms require considerable teacher time and commitment, a question was asked of the students to ascertain if they preferred that approach to evaluation or only the final mark. In other words, were they just as satisfied having only one total mark on assignments; or, having been exposed to detailed, criterion-based evaluation, did they prefer that method? The results of student preference revealed that 72.5% opted for the detailed evaluation, while 27.5% were still just as satisfied with only knowing a final mark or grade. These percentages represented a slight change from the percentage of students who felt that the detailed assessments were indeed beneficial (78.9%).

At the same time the students were being surveyed, so were their teachers. A separate questionnaire was developed and administered to them to complete. (See Appendix C.) The teacher questionnaire was open-ended and, therefore, did not lend itself to data processing. Consequently, representative answers to selected questions follow.

The teachers introduced the evaluation form to their students in a variety of ways. Most supplied them with a copy as they discussed it point by point; one teacher made a transparency and explained it and another discussed it in general terms, indicating that it was part of the overall evaluation process. They considered the students' reactions to their introductions to be positive and serious. Three of the five attempted to involve the students in some way in completing the form. Having the student present was the favored method. Others explained the results to the students when the forms were returned.

There was mixed reaction to the matter of having adequate time to observe the students in order to fairly fill out the evaluation form. For product criteria, there was no problem, but for process and affective domain criteria two teachers did experience difficulty due to time limitations and large classes.

While it might be considered more "objective" to have all criteria on the forms to be prepared on a quantitative basis, it was felt that for most process and affective domain criteria, only qualitative type criteria are possible and it would be extremely difficult to develop quantitative ones. It was noted that quantitative criteria are particularly appropriate for product evaluation in the secondary IV and V level machine shop courses.

All the teachers felt very strongly that using their detailed evaluation form made them more objective and thorough in their assessment of student performance. Moreover, most believed that the form provided them with the connection or link between instruction and evaluation.

A number of items on the teacher questionnaire pertained to perceived benefits to them and their students. All regarded the detailed evaluation method as being helpful and they offered a variety of reasons why. One mentioned that it built up student trust in the evaluation process; another observed that it changed the student mind-set from "good enough" to "correct". Other teachers stated that in one way or another it showed the students in advance what the criteria for success were, what to pay attention to, and where to apply themselves. Also, it demonstrated to the students that the teachers knew precisely what they were looking for and that they meant business. All the teachers felt that the students, once aware of their weaknesses, did improve on those factors, many doing so very quickly.

Utilization of the detailed evaluation forms did not tend to aid in evaluation flexibility or to necessarily influence instruction. The teachers did note, however, that the form permitted the assessment to be done in stages, at individual completion times, and without the need for comparative evaluation. The criteria on the form helped some teachers to maintain a clear idea of what to stress in their teaching and where to focus attention.

Some teachers found the form to be very useful during parent-teacher conferences and for information regarding student selection for future classes. Most considered the form with its numeric values to be an aid in preparing typical school end-of-term mark reports.

All the teachers found their form to be applicable to more than one assignment and felt with minor modification, it could be used in other subjects as well. Using the form did increase their overall work load, but this was offset by the students not making the same mistakes, by the appreciation shown by the students, and by the better communication it permitted.

Unanimously, the teachers praised and supported this approach to practical work evaluation. They believed it to be a worthwhile effort and were convinced of its merit enough to continue to use it in their future classes.

One teacher presented the approach to his department head who suggested he would recommend that its use be tried by other teachers. The other teachers, however, were more cautions in promoting the concept because they felt a teacher's evaluation process is a sacred, unquestionable domain. They mentioned that if they were asked for their opinion about it, they would gladly discuss its use. One teacher explained that forcing this approach on teachers would not be successful; they need to clearly understand the need for it and recognize the benefits that can result.

Conclusions

The information presented in Table 8 is a summary of student responses to a number of key questions reported earlier. It contains questions which have been re-phrased to fit the Yes-No format and others which have been re-constructed to cover a series of questions devoted to same idea. (For example, rating scale and criterion validity: the reported percentages are averages.)

Table 8 A Summary of Key and Collective Questions dealing with the Use of Detailed Evaluation Forms

Survey Question	% Yes	% No
Q. Did you feel the detailed evaluation forms were in any way threatening, intimidating, frightening, or too personal?	9.2	90.8
Q. Did you feel the criteria used on the forms were usually valid?	60.9	39.1
Q. Did you consider the rating scales used on the forms to be valid?	85.3	14.7
Q. Did you like the evaluation form used by your teacher?	85.0	15.0
Q. Did you feel having a detailed evaluation form was beneficial and helpful?	78.9	21.1
Q. Do you prefer having a detailed evaluation of your performance and work instead of only a final mark?	72.5	27.5

Overall, the student reaction and acceptance to the use of detailed evaluation forms was strongly positive. They preferred the approach, liked the forms their teachers used, felt they benefitted from its use, and did

not feel that it caused any particular type of anxiety. The teachers' response to the approach was likewise very positive and their opinions paralleled those of their students.

In the final analysis, it must be noted that the relative success and desirability of detailed evaluation rests with the individual teacher. The manner in which teachers introduce the concept, design and utilize their forms, and involve their students all contribute and determine how well students accept and benefit from this approach to performance evaluation. They, as teachers, must first be convinced of the merit and benefit of detailed evaluation before it can be passed on to their students.

This study has demonstrated that students and teachers can benefit from a detailed approach to process and product evaluation. Its application and implementation rests with the teacher. If they are willing to try it, they have made a judicious decision that can become very rewarding to them and their students.

INDUSTRIAL ARTS
Attitudes and Skills

Name _____ Project _____ Date _____

Course _____ Points Earned/Possible _____ /_____

ATTITUDES - - -

How you rate in the following categories:	Rating Scale			Comment
Self-Starter	☐	☐	☐	_____
Problem Solving	☐	☐	☐	_____
Industrial Interest	☐	☐	☐	_____
Co-operation	☐	☐	☐	_____
Safety and Welfare	☐	☐	☐	_____
Punctuality	☐	☐	☐	_____

SKILLS - - -

How you rate in the following skills:	Well Done; Very Good	Adequate or Satisfactory	Poor; Needs Improvement	Does Not Apply In This Case	Possible Points	Earned Points	Comment
Job Planning	☐	☐	☐	☐	( )	___	_____
Material Selection	☐	☐	☐	☐	( )	___	_____
Layout	☐	☐	☐	☐	( )	___	_____
Tool Selection	☐	☐	☐	☐	( )	___	_____
Tool Usage	☐	☐	☐	☐	( )	___	_____
Power Tool Selection	☐	☐	☐	☐	( )	___	_____
Power Tool Usage	☐	☐	☐	☐	( )	___	_____
Machine Selection	☐	☐	☐	☐	( )	___	_____
Machine Set-up & Use	☐	☐	☐	☐	( )	___	_____

PROJECT - - -

How you rate in the following areas:							
Dimensional Accuracy	☐	☐	☐	☐	( )	___	_____
Surface Finish	☐	☐	☐	☐	( )	___	_____
Sub-Assembly	☐	☐	☐	☐	( )	___	_____
Assembly	☐	☐	☐	☐	( )	___	_____
Function and Use	☐	☐	☐	☐	( )	___	_____
Protective Finish	☐	☐	☐	☐	( )	___	_____
				Total Possible Points	( )	___	Total Earned Points

Project and Assignment Evaluation

Student _____ Course _____

Assignment _____ Mark _____ Date _____

The items below are used to evaluate the assignments and projects done for the practical portion of the course you are taking. Some of the items deal with the processes you used to complete the assignment and others deal with the final project(s). How well you performed has been rated in each case. If a particular did not apply to this assignment, the (-) has been circled. Your mark for this assignment is an average of the ratings earned, with a 4 = A, 3 = B, 2 = C, 1 = D and 0 = F.

	Rating: Quality					
	Not Applicable	No Evidence	Well Done	Good	Fair	Poor
1. Preparatory Stage: Planning						
(a) neat & complete drawing prepared	–	0	4	3	2	1
(b) plan of procedures outlined	–	0	4	3	2	1
(c) bill of material included	–	0	4	3	2	1
2. Constructing Stage: Preparation						
(a) proper layout & measurement	–	0	4	3	2	1
(b) proper use of machine and power tools	–	0	4	3	2	1
(c) understanding of processing materials demonstrated	–	0	4	3	2	1
3. Machining Stage: Operation						
(a) correct procedures for setting-up machines	–	0	4	3	2	1
(b) correct clamping in workholding device	–	0	4	3	2	1
(c) correct cutting action	–	0	4	3	2	1
4. Completion Stage: Workmanship						
(a) corresponding worksmanship to finished project	–	0	4	3	2	1
(b) dimensions correspond to plan	–	0	4	3	2	1
(c) overall appearance of finished project	–	0	4	3	2	1
5. Independent Project: Research						
(a) presentation of topic	–	0	4	3	2	1
(b) format or layout	–	0	4	3	2	1
(c) research content	–	0	4	3	2	1

TECHNIQUES CHECK LIST

I. OBSERVATION

SCORE: 1 (poor) 2 3 4 5 (excellent)

1. Eyes on copy. _____
2. Posture--head, back, feet and fingers in correct position. _____
3. Fingering correct on all keys. _____
4. Rhythm steady, carriage kept moving. _____
5. Stroking firm with quick key release. _____
6. Quick carriage throws with eyes on copy. _____
7. Shift key reaches with appropriate baby finger. _____
8. Paper removal using paper release. _____

II. EXERCISE EVALUATION

1. No overtyping or erasing. _____
2. Instructions followed correctly. _____
3. All keys struck with equal force. _____
4. Uniform carriage return. _____
5. Capital letters not raised and second letter in proper place after using shift key. _____

III. EFFORT MADE TO IMPROVE _____

CHECKLIST FOR BUSINESS LETTERS

If letter contains more than two typing errors, it must be retyped before a mark can be assigned. Deduct five marks from total if the assignment has been retyped.

I. PROCESS (5)

_____ 1. Basic typewriting techniques (4)

_____ 2. Paper inserted correctly - letterhead at top of typed page (1)

_____ TOTAL OUT OF POSSIBLE 5 POINTS

II. PRODUCT (25)

_____ 1. Margins (2)

a) Proper left and right margins
b) Even right-margin maintained

_____ 2. Style (5)

_____ Block style

_____ Modified block style

_____ Modified block style, with indented paragraphs

_____ 3. Punctuation (2)

_____ No-Point

_____ Two-Point

_____ 4. Date on line 13 (1)

_____ 5. Letter address on appropriate line below date (1)

_____ 6. Salutation - doublespace before and after salutation (2)

_____ 7. Body of letter (2)

a) Single spacing within paragraphs
b) Double spacing between paragraphs

_____ 8. Complimentary close - typed a doublespace below body of letter (1)

_____ 9. Typed signature on fourth line below complimentary close (1)

_____ 10. Official title - either beside typed signature with comma between or on line directly below (1)

_____ 11. Reference initials typed a doublespace below official title (1)

_____ 12. No visible erasures or corrections (2)

_____ 13. Accuracy in typing - Each uncorrected typing error/-2 marks MAXIMUM of 4 marks

_____ TOTAL OUT OF POSSIBLE 25 POINTS

_____ TOTAL FOR EXERCISE OUT OF POSSIBLE 30 POINTS

CHECKLIST FOR CENTERING TABLES

If tabulations contain more than two typing errors, it must be retyped before a mark is assigned. Deduct five marks from total if the assignment has been retyped.

I. PROCESS (10)

_____ 1. Basic typewriting techniques, including shift lock and backspace key. (3)

_____ 2. Use of tabulator bar to move from column to column throughout exercise. (3)

_____ 3. Rough calculations for vertical centering. (2)

_____ 4. Eyes kept on book. (2)

_____ TOTAL OUT OF POSSIBLE 10 POINTS

II. PRODUCT (20)

_____ 1. Vertical placements (actual center) (6)

a) placement of main heading (2)
b) triple space after main heading and double space after columnar headings (2)
c) proper spacing through the rest of the exercise (2)

_____ 2. Main heading--centered horizontally, typed in capitals (2)

_____ 3. Horizontal placement of columns--equal left and right margins, appropriate number of spaces between columns (6)

_____ 4. Columnar headings typed properly over columns and underlined (2)

_____ 5. Accuracy - 2 marks deducted for each typing error - maximum of 4 points.

_____ TOTAL OUT OF POSSIBLE 20 POINTS

_____ TOTAL FOR EXERCISE OUT OF POSSIBLE 30 POINTS

Project Evaluation

Process	Points Possible	Points Gained
Specified materials utilized		
Design layed out to minimize waste		
Allowances made for finishing to size		
Operation sequence followed correctly		
Suitable cutting and forming tools used		
Appropriate machines and power tools used		
Proper abrasives and finishing materials used		
Specified machining tolerances maintained		
Specified assembly tolerances maintained		
Correct speed, feed, and depth of cut used		
Workpiece located correctly		
Workpiece clamped correctly		

Evaluation of Process

Project Name_____ Student Name_____

Sheet _____ of _____ Date _____ Course_____

Detail Number	Operation Number	Spec. Matl. Used		Suit. Tools Used		Approp. M/C Used		Proper Abras. Used		Machine Set Up and Operation									
										Feed		Speed		Depth of Cut		Locat. of W/P		Clamp. of W/P	
		Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Point Total																			

Project Stage Inspection

Project Name_____ Student Name_____

Sheet _____ of _____ Date_____ Course_____

Detail Number	Number Required	Item	Nominal Dimension	Finishing Allowance	Required Dimension	Actual Dimension	Error	Points	
								Possible	Earned

TOTAL POINTS THIS SHEET

Personal Characteristics and Work Traits

Student: _____ Course: _____ Date: _____

Since work habits, accepting responsibility, and dealing with others are important for eventual job success, this rating scale will let you know how well you perform in these categories. Your attitudes and behavior toward work performance are observed on a regular basis and are reported here as a summary of what has been seen recently.

	RATING					
	Always	Usually	Sometimes	Rarely	Never	COMMENTS
	10	8	6	4	2	
You are punctual by reporting to class on time.	☐	☐	☐	☐	☐	
You come to class prepared to work and get ready without delay.	☐	☐	☐	☐	☐	
You dress appropriately to your activity: shopcoat, apron, gloves, mask, etc.	☐	☐	☐	☐	☐	
You are organized once work begins and you use your time wisely.	☐	☐	☐	☐	☐	
You are conscientious about your work and do not engage in horseplay.	☐	☐	☐	☐	☐	
You are cooperative and willing to help others.	☐	☐	☐	☐	☐	
You observe safety rules and are safety minded.	☐	☐	☐	☐	☐	
You clean your own work station when finished and participate in general clean-up.	☐	☐	☐	☐	☐	
You exhibit initiative and eagerness in your work activities.	☐	☐	☐	☐	☐	
You respect the tools, equipment, and machines used and properly care for them.	☐	☐	☐	☐	☐	

Your overall grade is: _____ Instructor: _____

Project and Assignment Evaluation

Student _____ Course _____

Assignment _____ Mark _____ Date _____

The items below are used to evaluate the assignment and projects done for the practical portion of the course you are taking. Some of the items deal with the processes you used to complete the assignment and others deal with the final project itself. How well you performed in each case has been rated. If a particular item did not apply to this assignment, the dash (-) has been circled and it will not affect your rating. Your mark for this assignment is an average of the ratings earned.

	RATING					
	Not Applicable	QUALITY				
		Well Done	Good	Fair	Poor	No Evidence
Designing and Planning						
Research: Different sources investigated	-	4	3	2	1	0
Various design collected	-	4	3	2	1	0
Designing: Variety of ideas sketched for review	-	4	3	2	1	0
Ideas were creative and original	-	4	3	2	1	0
Ideas were feasible and practical	-	4	3	2	1	0
Planning: Plan of procedures outlined	-	4	3	2	1	0
Construction						
Preparation: Appropriate materials selected	-	4	3	2	1	0
Design laid out to minimize waste	-	4	3	2	1	0
Allowance made for finishing to size	-	4	3	2	1	0
Fabrication: Proper layout and measuring tools used	-	4	3	2	1	0
Proper cutting and forming tools used	-	4	3	2	1	0
Proper machines and power tools used	-	4	3	2	1	0
Proper abrasives and finishings materials used	-	4	3	2	1	0
Parts constructed in an appropriate sequence	-	4	3	2	1	0
Procedures followed according to drawing	-	4	3	2	1	0
Assembly: Appropriate assembly processes employed	-	4	3	2	1	0
Parts assembled in proper sequence	-	4	3	2	1	0
Machine Set-Up and Operation						
Set-ups: Correct tool cutters, tool bits selected	-	4	3	2	1	0
Proper speeds, feeds, depth of cut selected	-	4	3	2	1	0
Work properly located & clamped for the job	-	4	3	2	1	0
Machines properly adjusted	-	4	3	2	1	0
Operation: Machine operated with confidence and care	-	4	3	2	1	0
Machine turned off for adjusting	-	4	3	2	1	0

RATING

	Not Applicable	QUALITY				
		Well Done	Good	Fair	Poor	No Evidence

Completed Project

Design:	Materials were used to their best advantage	-	4	3	2	1	0
	Function is well served; performs as intended	-	4	3	2	1	0
	Item is visually appealing; well proportioned	-	4	3	2	1	0
Workmanship:	Parts fit properly; joints tight and secure	-	4	3	2	1	0
	Dimensions correspond to plan	-	4	3	2	1	0
	Accuracy: Linear - _____mm / - _____in.	-	4	3	2	1	0
	Angular - _____^{o}	-	4	3	2	1	0
	Radial - _____^{o}	-	4	3	2	1	0
	Surface well finished	-	4	3	2	1	0
	Overall appearance of the finished project	-	4	3	2	1	0

TOTAL = _____ of _____pts.

PERCENTAGE = _____ %

PENALTY FOR LATE SUBMISSION

Comments and Suggestions

STUDENT ASSESSMENT
of
DETAILED EVALUATION FORMS

Introduction

For the past year or term your teacher has been evaluating your class work and performance and your assignments or projects on a detailed evaluation form. Your reaction to this form would be appreciated. Indicate your feelings or opinion by putting a ✓or ✗ in the squares. Note that some questions allow you to answer more than once. Thanks for your help.

The Evaluation Form

1. Was the form discussed or explained by your teacher before a particular assignment or project was given?

   ☐ Yes ☐ No

2. Were you involved in the filling out of the evaluation form in some way?

   ☐ No, the teacher did it alone.
   ☐ Yes, by self-evaluating my own work.
   ☐ Yes, by rating or grading someone else's work.
   ☐ Yes, by being present when it was filled out.
   ☐ Yes, by:_____

3. When the form was completed (filled out) was it:

	Yes	No
Returned to you to keep?	☐	☐
Explained or discussed?	☐	☐
Shared with your parents?	☐	☐

4. Did you feel that the detailed evaluation form was in any way:

Threatening?	☐	☐
Intimidating?	☐	☐
Frightening?	☐	☐
Too personal?	☐	☐

5. Do you feel the marks or ratings you earned on the form were:

A good reflection of your ability?	☐	☐
Valid and fair?	☐	☐

6. How close were the marks you earned to what you expected?

   ☐ Less than expected ☐ About as expected
   ☐ More than expected

Evaluation Items

7. Do you think the items listed on the form (one is attached for you to refer to if you wish) that were used to specifically evaluate your performance and work were:

	Usually	Sometimes	Rarely
Appropriate?	☐	☐	☐
Clear and easy to understand?	☐	☐	☐
Relevant and meaningful?	☐	☐	☐
Comprehensive and thorough?	☐	☐	☐
Detailed enough?	☐	☐	☐

8. Next, please examine carefully the evaluation form that was used. If you think some of the items should be deleted or changed, indicate by item number or letter which ones need revision. If there are some items which should be added, please name them.

   A. Delete (remove) items ____, ____, ____, ____, ____, ____, ____.

   B. Change (modify) items ____, ____, ____, ____, ____, ____, ____.

   C. Suggested items to add: _____

   _____

   _____

Rating Scales (Note: Omit this section if scales were not part of your teacher's evaluation form.)

	Yes	No
9. Did you find that it was adequate to have your work judged on a scale from excellent or well done to poor or "needs improvement"?	☐	☐
10. Was the rating scale easy to understand?	☐	☐
11. Were the numbered values on the scale appropriate?	☐	☐
12. Did your teacher tend to make written comments next to the ratings?	☐	☐

In General

13. In the past you have undoubtedly had projects or assignments from other classes (not necessarily only shop or business ones) returned to you with only a mark on them. Do you feel having a detailed evaluation of your work (Performance and Projects) is better or are you frankly just as satisfied knowing your final mark or grade on a particular assignment? Please check your preference.

- ☐ Prefer detailed evaluation
- ☐ Prefer final mark or grade

14. How many of your assignments or projects were individually evaluated on the forms?

- ☐ 1
- ☐ 2 or 3
- ☐ 4 or 5
- ☐ 6 or more

15. Before this course, how many other shop or business type courses have you had?

- ☐ None (If so, skip the next question)
- ☐ 1
- ☐ 2
- ☐ 3 or more

16. Did the teacher(s) in your previous course(s) use detailed forms to evaluate your performance and assignments?

- ☐ Yes, always
- ☐ Yes, sometimes
- ☐ No

17. Do you feel you were adequately observed by your present shop or business education teacher to permit him or her to make a fair assessment of your work habits and skills?

- ☐ Yes, essentially
- ☐ Yes, I think so
- ☐ Questionable
- ☐ No, not enough

		Yes	No
18.	Did you like the evaluation form used by your teacher?	☐	☐
19.	Do you wish more teachers used detailed evaluation forms in their classes?	☐	☐
20.	Would you feel disappointed if a teacher started using a detailed form, then later on stopped using it?	☐	☐
21.	Do you think the school should recommend that most of its teachers use detailed evaluation forms?	☐	☐
22.	Do you feel having a detailed evaluation of your work and performance was beneficial and helpful to you?	☐	☐

23. If you answered Yes to Question 22, please check those factors which may have had an influence on helping you to do better.

- ☐ Made me aware of my weaknesses as well as my strengths.
- ☐ Helped me to plan my work or projects better.
- ☐ Made me more safety conscious.
- ☐ Permitted me to make better use of my time. (I became more efficient)
- ☐ Knowing my weaknesses allowed me to concentrate on them in order to improve myself.
- ☐ Helped me to know exactly how my work was going to be graded.
- ☐ Changed my performance and attitude to the better as a result.
- ☐ Allowed me to give more attention to those areas being stressed or emphasized on any particular assignment.

Other influences or factors of benefit to you (please list):

_____

_____

_____

Thanks very much for completing this questionnaire. Your opinions are appreciated and will be combined with those from many other students from different schools. The outcome will be to see and determine if any general or overall consensuses exist among you!

TEACHER PARTICIPANT ASSESSMENT

of

PROCESS and PRODUCT EVALUATION FORMS

Introduction

After having used your detailed evaluation form, now I would appreciate your reaction and critique of it and the whole concept of formal evaluation of practical work activities and student performance.

In contrast to the check-off student questionnaire, yours is basically open-ended, so you may comment on things that happened and perhaps explain why they did. As a result, this questionnaire becomes lengthy (as will probably be the time to complete it!).

Thanks again for your help.

Background Information

1. Title of course for which the forms were used: _____
2. How many times have you taught this course? _____
3. Duration of the course in weeks or semesters: _____
4. Was the class made up of both males and females? _____
5. Secondary level (grade) of the students in the course: _____
6. On the whole, was this the students' first shop or business course?

   _____
7. At what academic level (above, at, or below average) would you put the students collectively in your course?

   _____
8. Including this year, how many years have you been teaching? _____
9. Did you use detailed evaluation forms prior to this research project?

   _____

The Form's Utilization

10. Did you find the form applicable to more than one assignment or project?

11. Did you find the form applicable to more than one course? (If you taught only one course, could it be applied without modification to other courses in your department?)

12. Were the forms handed out or discussed before any given assignment was made?

13. Do you feel that this method of evaluation increases or decreases your overall workload?

14. If your workload is increased, is the extra time and commitment worthwhile? Why? Any trade-offs, e.g., other things made easier or faster?

15. Did you find that you had adequate time to sufficiently observe your students in order to fairly fill out the forms?

16. In filling out the form, how do you do it: alone, with the student present, have the student do it, or whatever?

17. If students are involved (if such is the case with you) in evaluating others' work, what is their reaction to:

    a) evaluating someone else's work?

    b) having someone else evaluate their work?

18. How (in what manner) was the evaluation form introduced to your students?

19. What was the students' reaction to the form? Did their attitude change (positive to negative or negative to positive) as they became more familiar with it?

20. Do you feel using the form made you more "scientific" or objective in your evaluation?

21. Did you find you were using the form as a means of instruction as well as evaluation? If so, how?

22. On items (performance or attitudes) which remain somewhat constant, did you find after a period of time that their attainment level reached a plateau, after which continued evaluations proved meaningless?

23. Approximately how many individual projects were evaluated on the forms for each student?

24. Did you find it necessary to prepare auxiliary forms to adequately evaluate a particular portion of a given assignment? If so, what was prepared?

25. Of all the various types of technical and business courses (exploratory, ITT, industrial arts, personal interest, short or long vocational, etc.), do you feel there are any for which appropriately prepared evaluation forms would NOT be valid or useful?

Form Evaluation

26. After having had the experience of using and completing the form based on the items (criteria) selected, which, if any, have you found awkward to use or which really turned out to not adequately describe the activity or desired characteristic?

27. Further to Q. 26, what other specific criteria would you delete or change from your forms? What's missing that needs adding as well?

28. Did you find the numerical rating scales (if you used them) to be adequate and appropriate? Would a continuum of a numbered range be a better alternative? Or a range from excellent to poor without in-between levels?

29. While the criteria are an attempt at objectivity, an element of subjectivity still often exists in making rank or rating judgements. Do you feel the criteria should be worded more quantitatively? How?

Form Benefits: Teacher and Student

30. In what ways do you feel the form was beneficial or helpful to the student?

31. Did you find that students whose work habits or attitudes needed improvement, did in fact improve? Any examples to mention?

32. Did you find that using the form offered you any greater freedom or flexibility in evaluating assignments as they were submitted? (as perhaps opposed to grading them all at once or after all were in)

33. Did you find that the form had any influence on keeping instruction "on track" or towards meeting course objectives or content? If so, how and to what extent?

34. Do you feel the forms could give you documented evidence of student performance? If so, how could such information be used?

35. Have you found having the forms makes it easier to complete your school's student mark or progress reports? If so, how?

36. Do you see yourself trying to get other teacher colleagues of yours interested in doing formal evaluation of practical activities? Explain.

37. Would you use the forms and the process again? Are you convinced of its merit? Any lingering doubts or reservations?

38. Any further comments or observations. Thanks!

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